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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/068,364	02/08/2002	Bradley R. Ringeisen	82,621	6047

26384 7590 07/29/2004

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EXAMINER

FULLER, ERIC B

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 07/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/068,364	RINGEISEN ET AL.	
	Examiner	Art Unit	
	Eric B Fuller	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 21-44 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 21-44 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7, 13-18, and 22-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joyce, Jr. et al. (US 5,292,559) in view of Baer et al. (US 6,495,195 B2) and Mayer (US 6,159,832).

Joyce teaches a pulsed laser deposition process for depositing electrically conductive materials on to a transparent, flexible polymer or quartz, substrate that uses the same configuration as the applicant, i.e. laser through back of transparent substrate (column 2, lines 59-65). The laser is computer controlled and is directed through an objective (column 4, lines 6-31). It is taught that a multi-layered composite material that is deposited on the transparent substrate comprises a matrix material (the polymer) and a transfer material (the composite metal). The matrix material has the property of being desorbed from the support when exposed to the laser (abstract). The material being transferred and deposited is a composite (abstract). A gap exists between the target substrate and the receiving substrate (figures).

Joyce teaches the limitations of claim 1, as shown above, but fails to explicitly teach depositing biomaterials. However, Baer teaches a process of laser transferring

biomaterials by a process that uses a similar transparent substrate and composite layer as taught by Joyce (column 2, lines 25-54). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to deposit biomaterials by the process taught by Joyce. By doing so, one would have a reasonable expectation of success as the process taught by Joyce is independent of transfer material, due to the matrix material causing the transfer, and Baer teaches a similar process that transfers biomaterials.

The references above are silent to forming a microarray. However, Mayer teaches that by using ultra-fast lasers pulses, high resolution and precision is achieved (abstract; column 5, lines 1-26). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to utilize ultra-fast last pulses. By doing so, higher resolution and precision is achieved. The pattern deposited by the ultra-fast laser reads on being a microarray.

Claims 8-12 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joyce, Jr. et al. (US 5,292,559), Baer et al. (US 6,495,195 B2), and Mayer (US 6,159,832), as applied to claim 1 above, and further in view of Ross (US 5,743,560).

Joyce, in view of Baer and Mayer, teaches the limitations of claim 1, as shown above, but fails to explicitly teach machining the substrate with the laser. However, Ross teaches laser machining of substrates is that is performed in order to achieve design features. For glass substrates, the machining is performed after the coating, due to the powerful laser required to perform such a process. For non-glass substrates, the

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machining is performed before the coating (column 2, lines 4-43). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to utilize the laser machining taught by Ross in the process taught by Joyce, in view of Baer and Mayer. By doing so, design features are achieved. To perform the machining prior to or after the coating would have been obvious depending on the substrate that is used, as taught by Ross. To machine with the same laser used in transfer or a different laser would have been equally obvious, as the choice between which laser to use is not critical to the success of the process. Deposition on a machined substrate, reads on the substrate being non-planar, as pertinent to claim 21.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-18 and 21-44 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-19 and 22-52 of copending Application No. 10/068,364. Although the conflicting claims are

not identical, they are not patentably distinct from each other because the claim 1 of the present invention reads on claims 1, 8, and 26 of the copending application. To combine these limitations into one claim would have been obvious at the time the invention was made to a person having ordinary skill in the art.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric B Fuller whose telephone number is (571) 272-1420. The examiner can normally be reached on Mondays through Thursdays.

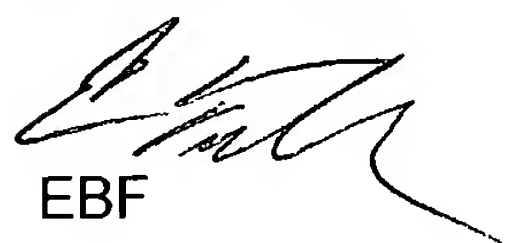
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P Beck, can be reached on (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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EBF



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